

## IN THE SPECIFICATION

Please replace the paragraph [0016] beginning at line 14 on page 4 with the following paragraph:

Figure 4b and 4c illustrates a table showing the results of the operation of Figure 4a for a  $3 \times 3$   $1 \times 3$  matrix; and

Please replace the paragraph [0042] beginning at line 1 on page 11 with the following paragraph:

Figure 5a 4a illustrates a flow chart describing the recursive calculation of the syndrome vector. In step 40, the index  $n$  is set to "0" and an initial vector  $T_0$  is defined. In step 42, the index is incremented and in step 44,  $T(n)$  is defined as  $T(n)=R(A(n))_n * T(n-1) + T(n-1) << 1$ . For  $T_1$  (i.e.,  $n=1$ ), this calculation would be equivalent to  $\{A_1\} * \{1\} + \{1 \ 0\}$ . Therefore,  $T_1 = \{1 \ A_1\}$ . In step 46,  $U(n)$  is calculated as  $U(n)=T(n-1) * \{E(n) \ E(n-1) \ \dots \ E_1\}$ . For  $n=1$ ,  $U(n)=\{1\} \{E_1\}=\{E_1\}$ . In step 48,  $W(n)$  is calculated as  $W(n)=\text{sum}(U(n))$ . For  $n=1$ ,  $U(n)=E_1$ . The modified syndrome vector is set to:

$$\begin{bmatrix} W_1 \\ \vdots \\ W_v \end{bmatrix}$$